

KD-Validated Anti-MAPK10 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody

Catalog # AGI1599

Product Information

Application	WB, FC, ICC
Primary Accession	P53779
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	24GB320
Calculated MW	52585
Gene Name	MAPK10
Aliases	Mitogen-Activated Protein Kinase 10; JNK3; P54bSAPK; P493F12; PRKM10; Stress-Activated Protein Kinase JNK3; Stress-Activated Protein Kinase 1b; C-Jun N-Terminal Kinase 3; MAP Kinase P49 3F12; MAP Kinase 10; EC 2.7.11.24; SAPK1b; JNK3A; Stress Activated Protein Kinase Beta; JNK3 Alpha Protein Kinase; EC 2.7.11; MAPK 10; SAPK1B
Immunogen	A synthesized peptide derived from human JNK3

Additional Information

Gene ID	5602
Other Names	Mitogen-activated protein kinase 10, MAP kinase 10, MAPK 10, 2.7.11.24, MAP kinase p49 3F12, Stress-activated protein kinase 1b, SAPK1b, Stress-activated protein kinase JNK3, c-Jun N-terminal kinase 3, MAPK10, JNK3, JNK3A, PRKM10, SAPK1B

Protein Information

Name	MAPK10
Synonyms	JNK3, JNK3A, PRKM10, SAPK1B
Function	Serine/threonine-protein kinase involved in various processes such as neuronal proliferation, differentiation, migration and programmed cell death. Extracellular stimuli such as pro-inflammatory cytokines or physical stress stimulate the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. In this cascade, two dual specificity kinases MAP2K4/MKK4 and MAP2K7/MKK7 phosphorylate and activate MAPK10/JNK3. In turn, MAPK10/JNK3 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN and ATF2 and thus regulates AP-1 transcriptional activity. Plays regulatory roles in the signaling pathways during neuronal apoptosis. Phosphorylates the neuronal microtubule regulator STMN2. Acts in the regulation of the amyloid-beta precursor protein/APP signaling during neuronal differentiation by phosphorylating APP. Also

participates in neurite growth in spiral ganglion neurons. Phosphorylates the CLOCK-BMAL1 heterodimer and plays a role in the photic regulation of the circadian clock (PubMed:[22441692](#)). Phosphorylates JUND and this phosphorylation is inhibited in the presence of MEN1 (PubMed:[22327296](#)).

Cellular Location

Cytoplasm. Membrane; Lipid-anchor. Nucleus Mitochondrion.
Note=Palmitoylation regulates MAPK10 trafficking to cytoskeleton. Recruited to the mitochondria in the presence of SARM1 (By similarity).

Tissue Location

Specific to a subset of neurons in the nervous system. Present in the hippocampus and areas, cerebellum, striatum, brain stem, and weakly in the spinal cord. Very weak expression in testis and kidney

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